

## BEND IN THE RIVER SUSTAINABLE COMMUNITY EDUCATION

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An Integrated Service Project summary submitted to the University of Utah in partial fulfillment  
of the requirements of the Service Learning Scholars Program through the Lowell Bennion  
Community Service Center

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### **Abstract**

I have had the opportunity to partner with the Bend in the River over the past semester to create my final Integrated Service Project. Community partners expressed a need to expand storage and greenhouse space on their site. I was able to draw upon my architectural education to develop a solution to address building a new structure on a very environmentally sensitive site. Through design reviews with the Bend in the River, community members, local architects, and the city we have created a space that will be pleasant and usable for all disciplines.

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The structure itself is created by a gabion, or caged rock, living wall facing the neighborhood. Direct access to park functions allows volunteers to easily address work from the new storage shed. Elevated planters within provide growing tables capturing warm winter sunlight and below a delivery space for other materials. The majority of the tools were placed in a secondary secure area to allow multiple levels of access to several volunteer members of the community.

In my design, I hoped to capture the essence of the most literal “bend in the river” with the slight curvature of the structure matching that of the river and pathway. The term “levee” was applied early on since we created a physical barrier to the structure from residential homes. The large levee anchors the structure to the site and will provide a very natural and growing perspective.

Through the use of green and sustainable design practices we can foster an advanced engagement with our environment as well as our community. With projects such as the Bend in the River our social responsibility to grow and maintain crucial urban ecological area will increase as the human impact on our planet decreases.

## **Introduction and Background**

Civic-engagement has long been a large part of my life and truly will continue to be so as I transition from a student into the professional world and beyond. Service is a simple word for helping another whether it is an elderly neighbor or an orphan on the other side of the world. Volunteerism is the commitment to continuously giving your time, energy, resources to a greater cause outside of yourself. Sincerity ensures that these measures are taken without regard to personal benefit. These elements together create civic-engagement.

The Service Learning Scholars program of the University of Utah's Lowell Bennion Community Service Center hosts a multilateral structure between student's academic coursework, initiative to gain experience and public needs. As a student in the program I have had the opportunity to enhance my educational skill set while participating actively within our greater University and Salt Lake City community. This collaboration has offered me a much greater sense of the comprehensive whole that defines the systems of our world.

## **Review of Literature**

A comprehensive approach was taken as to the integration of the project into an existing complex of structures and presence of urban ecology. My literary reviews took place through a series of stages beginning with "A Pattern Language" in which the ideals of community are evaluated. This book was especially interesting to me for the perspective of Jane Jacobs, a revolutionary designer fighting "corporate" cities in New York throughout the 1950's. She was a powerful activist in the decaying of our urban cities and expressed the importance of maintaining the street for inner community development.

Many of her theories for providing a human scale to our built environment were drawn upon when first investigating this project. In my view, I felt that the vision of Jane Jacobs would strongly suggest a project such as the Bend in the River. A place that was accessible to the pedestrian and draw members of all backgrounds to engage in their built environment.

Once realizing the stance that such an expansion project would have to take on this sensitive site I began to review the fundamentals behind architectural design. I reviewed several design books that focus on the form, space and order of structures in relationship to one another as well as the natural world. While in this continuous stage of progression there was also the need to address the materiality of components within the structure, as this often describes the opacity and translucency of buildings and their form.

The final documentation describes construction practices in sectional details. In order to draw these details accurately several construction documentation texts were compared. I creatively found solutions to key components through this type of expansive reference. In the final productions I largely depended on the background of my coursework in architecture and construction to integrate building technology systems into a holistic project.

## **Procedure**

It was a unique connection to have my community partner housed within the Bennion Center. The Bend in the River is an urban ecological garden along the Jordan River Parkway. The land was granted in 1996 to a collaborative partnership between the Bennion Center, community members and local area elementary school students. They participate directly with diverse community partners to educate and care for this natural learning environment in a very dense urban setting. Today, the park provides an engaging and educational green space for users to learn about responsible urban ecology.

The high rate of success in the Bend in the River project has allowed them to expand the resources on the site to include a gardening shed and an urban tree house for class fieldtrips from local elementary schools. Grounds are preserved through numerous volunteers and events throughout the year celebrating the conservation of the environment. The Bend in the River has been so successful that they are not only maintaining their own gardens but beginning to cultivate the adjacent property across the river at Modesto Park.

Due to this expansion in the initial scope of work the Bend in the River expressed a need to expand their small storage shed into a larger secure space that could also accommodate the growth of plants year round. The program began at the roots of gentle living and sustainable design.

I am a graduating student from the College of Architecture and Planning. In my undergraduate studies we have attained knowledge of deriving precedence within history, the context of social factors and forms that contain space. It is a unique discipline in which we are not taught the way but rather to find our own way. The college endorses open communication for students to learn how to think creatively beyond the restraints of physical law or social rules.

Throughout my studies of architecture, professors have consistently reminded us of the seriousness of taking environmental impact issues into consideration. But never had a project been presented that was so focused on the ideals of living naturally within our built environment. The Bend in the River sustainable building project community education initiative has drawn from all my skills gained within the classroom. It has given me an edge on my peers by allowing me to apply and test my theories through real-world experience.

Our main goal was to design a new shed for use by the Bend in the River volunteers. The project looked at programming, context, materials, energy, feasibility, security and constructability. In doing so we synthesized “green” building information into clear ideas that virtually anyone from the community could replicate in their own ways to reach toward a more sustaining lifestyle. Since the Bend in the River’s mission is so well pronounced on the site itself the program was attacked from a critical angle of environmental preservation through collaboration of civic-engagement.

The first step in deciphering the needs of the Bend in the River was to create the program, or the relationship of spaces, that the shed would encompass. As a team we began to diagram the users of the shed and equipment contained within; their demographics, frequency of service and capacity of performance. There was a wide diversity of categories from elementary school children, local neighbors and volunteers traveling to give time. This meant the space would have to be extremely flexible between a few volunteers and an entire classroom visit.

By overlapping uses in a very literal way, hanging garden beds above the storage and work areas within the shed, we were able to minimize the amount of space allotted. Raising the plants into the tighter ceiling space would also provide a little more warmth during Utah's harsh winters. In the summer this method works similarly in drawing cooler air from low open vents through the space and out through the use of a solar chimney. In addition to air circulation the windows allow for natural sunlight to penetrate through the structure and light the interior year round.

The modularity of materials dictated the form and size of the shed to prevent construction waste. The shed consists of two compartments, a working/receiving bay and equipment storage area. The later of the two would need stricter access since local volunteers would be accessing the working area on a weekly basis to tend to plants during both the summer and winter months.

The form itself reflects the bending of the river and only contains elements from the natural environment. A living river rock-filled gabion wall anchors the structure to the site and permits ecosystems to start anew within its pervious surface. The shed enclosure is created from salvaged wooden pallets that would otherwise be tossed to local landfills. The pallets are dismantled and reassembled into the siding of the shed. Loose gravel flooring releases water and earthly debris back into the ground below and is easily maintained for safety considerations. All materials used, aside from mechanical fasteners such as nails, are specified to be of recycled material and have the ability to be recycled again after their use in the shed.

### **Results**

The end result was a set of drawings for the construction of the new shed in a prominent information board at the entrance to the Bend in the River. By informing the local community we hope to gain both momentums in financial resources as well as partnered support toward the actual construction within the next few years. The shed plays an important role in the Bend in the River master plan and future ambitions.

In addition to the main welcome panel we have dissected the shed's design into six informational kiosks focused on one system of sustainability that can be integrated into any home or structure. These descriptive signs enable local residents to imagine specific measures that could be implemented in their own life. They also provide useful resources to more information of collaborations within our reach at the city, state and federal levels of sustainable cooperation.

### **Reflection**

I feel that only through this type of hands-on experience can a student truly understand the impact of their academic studies and significances of future ambitions. I fear that many pass through higher education without obtaining the true insight of what it means to be a global citizen. I've personally gained determination to push design, the ability to present my skills to members within the community and a language in which to translate my ideas into another's education and understanding.

In my professional life I am pursuing humanitarian architectural work within the reconstruction of conflict zones. I am extremely driven and passionate about healing communities through the power of architecture. I plan to work closely with local organizations on the ground around the world to develop architectural projects that will address the needs of those in poverty. By relieving these deficits of social emptiness we can build stronger connections between diverse peoples and provide much more wholesome interactions to understand one another. Offering communities a neutralized space in which people of all cultures, all faiths, and all backgrounds are welcome will foster interpretation of the greater goals facing our society.

Only this past year have I been able to formulate an avenue for the future of obtaining these ambitions. Having this experience has helped me to connect to my immediate university community. It has allowed me to branch into unknown territory within the Salt Lake Valley and build relationships with future professional peers. Through my work I've gained a sense of pride and confidence of my design. It has proven the importance of life-long service and engagement with the environments that surround us. Truly, without the Service Learning Scholars program I would not have been able to realize the specific niche within my field that prospects an extreme need within the sustainability of our global society.

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